Testimony to the Field Hearing on

"Management Challenges on Montana's National Forests"

U.S. House of Representatives

Committee on Resources

Subcommittee on Forests and Forest Health

Seeley Lake, Montana

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Good morning Mr. Chairman and members of the committee. My name is Bob Harrington, Montana State Forester and Forestry Division Administrator of the Montana Department of Natural Resources and Conservation. I appreciate the opportunity to speak with you on this subject, and am pleased you have chosen Seeley Lake for this field hearing.

Americans have had the great luxury to debate at length over management strategies to improve the health of our national forests. Opinions on how that should be accomplished are as diverse as the citizens of this country. One opinion is that accelerated timber harvesting alone would address the forest health problems on federal lands. Others advocate a policy that would prohibit proactive forest management and allow fire, insects, and disease to manage the forests instead. Somewhere in between these extremes, the embattled managers of Montana's national forests are trying to implement policy, and get things done on the ground.

There are many critical points you should consider as you explore legislative solutions for the forest health problem. I would like to focus on a few of them:

Ø Thinning a few trees around forested subdivisions and communities will not guarantee the survival of our communities at risk. When combined with drought conditions, the current amount of fuel on our national forests contributes to fire intensities that can overwhelm firefighters and the even the most extensive community fuel reduction projects.

Ø Restricting forest management projects to a buffer area around homes will not address the broader forest health problem on national forest lands, and the threats from insects, disease, and fire to forested watersheds and productive timberlands.

Ø Timber harvest on national forests will not prevent fires, but will decrease the intensity of fires when they do occur – allowing safer and more efficient fire suppression tactics. It will also not eliminate insect and disease outbreaks, but it will lessen the impact when they occur.

Ø Historic forest stand types and their relationship to fire were as diverse as the plants and animals found in them: some forest types experienced low-intensity fires every 10-20 years, others burned only once every 100-200 years, with many separate regimes in between. Forest management projects designed to reduce fuels, improve forest health, and mimic natural processes need to be designed accordingly.

Ø The appeals process for project implementation leads to project planning costs 2-3 times as much as usual, and consumes valuable staff time that could better be spent on project implementation. The US Forest Service is the only federal agency with the NEPA appeals process codified in statute. Legislation is needed to give the agency more flexibility in managing the appeals process, similar to the BLM and other federal agencies.

Ø Public involvement in project planning is critical --- but such involvement must be collaborative by all parties, and conducted in good faith. Recent changes to the categorical exclusion (CE) rules will help streamline the appeals process that has been abused for too long. Congress should support changes such as these, and facilitate additional CE protection for all forest management projects developed in a collaborative manner with stakeholders and the general public.

Ø The pending revision of forest plans on Montana's nine national forests could cost up to $100 million. Streamlining this process would make valuable staff and financial resources available to implement more

forest health projects on the ground.

Ø A viable wood products and logging industry is important to the state of Montana, and a critical component of implementing forest health improvement projects. As the states of Colorado, Arizona, and New Mexico have experienced, the ability to implement projects is severely limited --- if not eliminated altogether--- if the infrastructure is not in place. We cannot complete the needed fuel treatments with non-commercial thinning alone. Commercial forest products can and should be harvested from our national forests, and can help offset the high costs of the forest health restoration work that is needed.

Although most agree that forest fuels adjacent to our communities should be treated, the distance from structures that fuel treatment should occur is still debated. Some believe the Forest Service should continue identifying and treating high-risk areas away from our cities and towns, while others believe all commercial logging on federal forests should end --- and file appeals and lawsuits toward that end.

Consequently, science–based forest management proposals on national forests that have been developed in collaboration with resource specialists, affected stakeholders, and the general public continue to be delayed and derailed. The internal appeals process and court challenges have been used to handcuff agency professionals, and to prevent good projects from moving forward.

Nowhere is this more evident than in the Bitterroot Valley south of Missoula, where approximately 350,000 acres burned in the summer of 2000. During those fires, more than 15,000 acres of the Sula State Forest burned. To date, DNRC had salvaged over 27 million board feet of dead timber on over 6,000 acres, generated $6 million for trust beneficiaries and forest improvement, and completed numerous fire rehabilitation projects on burned trust lands. The majority of this harvest occurred within six months of the fire, allowing us to capture maximum value from purchasers.

Prior to the fires of 2000, the Sula State Forest had been managed for timber production, including several recently completed sales. In general, certain harvested areas on state and adjacent private land reduced fire behavior, and prevented additional mortality to standing trees. For various reasons, this pattern was not universal --- some harvested areas burned intensely, and other unharvested areas burned with mixed severity. I have attached a summary of fire behavior on the Sula Forest by Dr. Peter Kolb, MSU Extension Forestry Specialist for further consideration by the committee.

Timber salvage areas on the Sula Forest experienced significantly less erosion and debris flows than on adjacent lands where salvage logging had not occurred. Although variable weather patterns may have contributed to this result, we believe the logging activity and woody debris left behind prevented significant soil movement within the watershed.

The Bitterroot National Forest has had much more difficulty, thus far salvaging only approximately 20 million board feet of the estimated one billion board feet of federal timber that burned in 2000. Delay in implementing harvest has seriously reduced the value received to about 10% of the value received by DNRC for its timber. The success of the DNRC salvage operation on trust lands represents a tremendous effort by our staff and the State Board of Land Commissioners. However, I do not believe the problems implementing salvage projects on adjacent national forest land represent a lack of commitment or competence of Forest Service staff. Rather, it represents the difference in administrative frameworks each agency operates within, and how cumbersome it is to implement projects on the national forests.

DNRC was fortunate to have the general support of Bitterroot residents, the State Land Board, and experienced no lawsuits over our salvage timber sales. In contrast, even after an open and collaborative planning process for its salvage sales, Bitterroot Forest staff has been burdened by appeals, lawsuits, negotiated settlements, and continued scrutiny from entities opposed to all logging on federal lands.

Whether it is the salvage of fire-killed timber on the Lolo National Forest, or fuel reduction projects such as the Clancy-Unionville project on the Helena National Forest, projects designed to improve the health of the forest and associated resources continue to be delayed or blocked altogether. While this gridlock continues, we continue to experience the following:

Ø Our national forests continue to be subjected to extensive losses from fire, insects, and disease;

Ø Timber-dependent workers and communities continue to lose jobs and economic sustainability;

Ø Local, state, and federal firefighters continue to be exposed to extreme fire behavior, threatening lives and costing billions of dollars.

We know that fire, insects, and disease are merely symptoms of a greater problem: the loss of the historical diversity in forest conditions that greeted Lewis and Clark as they passed through this region nearly 200 years ago. If our nation’s forests are to adapt to the predicted increase in the atmosphere’s temperature and associated weather extremes, we must continue to restore the mosaic of timber types once present on the

landscape.

Clearly, Congress should enact legislation that expedites the implementation of collaboratively planned projects, not only adjacent to communities at risk, but wherever forest health problems and priorities exist. I applaud the passage of the Healthy Forest Protection Act by the House of Representatives, and encourage the Senate to pass a bill with similar intent. The Western Governors Association's (WGA) 10-year comprehensive strategy establishes a good framework for negotiating the final version of the legislation.

I am confident that efforts such as this field hearing will help move us toward restoring the health of our forests, protection of our watersheds, and maintain the economic health of Montana's rural communities. I encourage you to continue to work toward passage of legislation that reinvigorates the mission and productivity of the U.S. Forest Service.

Thank you,

Robert A. Harrington

Montana State Forester

Forest Management and Wildfire Observations

Peter Kolb (PhD) MSU Extension Forestry Specialist, School of Forestry Assistant Professor of Forest Ecology

Sula State Forest

The Sula state forest burned as part of the wildfires that burned across the Bitterroot Valley during 2000. Multiple ignitions coupled with drought, hot weather and extremely low fuel moistures led to uncontrollable wildfires across much of Montana and Idaho. This period was also marked with periodic high winds, most noted on what was called "Black Sunday" when wind gust well over 40 miles per hour caused erratic and dangerous wildfire spread. News footage of the fire camp in Ross Hole being overrun by fire made the national evening broadcasts. The fire camp was located in the broad bottom of Ross hole with mowed meadowlands and croplands surrounding the camp for at least ½ mile in either direction, and lies in the middle of the Sula State Forest.

Fire behavior – post fire review

Per the request of the ranch manager of the Shiny Mountain Ranch, which is surrounded by the northern portion of the Sula State Forest, and with Chris Tootell, the then chief of DNRC Service Forestry, I visited the Sula forest in late August of 2000. I had been in contact with the Shiny Mountain Ranch the previous year regarding wildfire concerns in the surrounding forest. This prompted numerous additional site visits, tours, and subsequent research during the summer of 2001.

We found that the Sula State Forest burned in a mosaic of fire intensities and severities. We were very interested in fire behavior, particularly around "islands" of green trees that survived across the landscape next to high intensity burn areas. To help analyze fire behavior I interviewed Mark Lewing, who was in charge of the fire suppression activities on the Sula and had kept a diary of events. I also brought Mick Harrington (PhD), lead fire behavior specialist from the Fire Sciences Lab USDA Forest Service out to the Sula State forest to examine and discuss theories that we had developed with regard to fire behavior.

Findings

Mosaic patterns were affected by landscape features, fuel conditions, time of day, wind patterns, and past forest management. Wind direction and speed, as well as topographic features such as canyons that funneled heat, and steep slopes that exacerbated wind effects had an overriding and predictable impacts on fire intensities and severities. Steep slopes and narrow canyons almost always led to stand replacing run-away fire conditions. Under these circumstances, the only forested areas that did not burn intensely and severely where those that were surrounded by clearcuts, patch-cuts, and widely spaced uneven aged management units. On average, any clearcut that had regeneration younger than 30 years showed some resistance to carrying an active crown-fire, and in some cases stopped surface fires as well. Standard thinnings that left fairly dense forested stands with average between tree spacings of 15 feet or less appeared to be ineffective in modifying active crown fire behavior. Those areas of adjoining property where thinnings of 30 feet between trees were in place did have noticeable effects, causing active crown fires to drop to the ground

The role of logging debris and coarse woody debris retention prior to fire

The Sula State Forest was of interest because in the year preceding the fires of 2000, the manager of the

Shiny Mountain Ranch had called asking for help regarding woody debris disposal. Upon inquiry, it became evident that he was concerned about logging debris that had been placed back into forested conditions to satisfy Coarse Woody Debris retention policy. Approximately a decade a ago a general forestry practice was adopted that advocated the retention of significant amounts of logging debris for the purposes of nutrient cycling and wildlife habitat. This practice, sound in theory, did not take into full account the risks to wildfire hazard. Most wildfire hazard calculations are conducted using a standard bad day format (87 F, 17% relative humidity, and winds of 12 mph 20 ft above the soil surface) and fuel loading using the BEHAVE model. Under these circumstances the logging debris left probably was well within standards for slash hazard reduction guidelines. It is my contention that these calculations gave a false sense of security since the wildfires of 2000 where under significantly worse conditions (90+ F , 5% relative humidity, and winds over 30 mph). Based upon observations on the Sula State Forest, prompted by the Shiny Mountain Ranch, management areas that had a coarse woody debris retention management prescription tended to support lethal surface fires and were more prone to developing into crown fires. Coarse Woody Debris guidelines, therefore, need to be refined to take into account the probability of wildfires under extreme conditions.

Salvage logging

Salvage logging on the Sula State Forest occurred within months of the wildfire occurrence. The ability to quickly respond to wildfire-affected areas had multiple benefits. Wildfires leave an area with little vegetation and covered with highly erodable ash. Fire adapted plants can rapidly recolonize burned areas one to two years after an event and help stabilize soils. Logging prior to plant colonization does not disturb this vital process and may actually help by breaking up ash covered hydrophobic soils. Placement of logging debris on contours to create erosion barriers further reduces soil displacement. This practice is identical to the costly but proven post-fire rehabilitation treatment of “contour felling”. Finally, the rapid extraction of fire-killed trees maximizes the economic value and utilization of this resource. The wood in fire killed as well as insect and disease-killed trees rapidly becomes unsuitable for most wood product purposes.

The landscape picture

Critical landscape review of the Bitterroot fires, Nine-mile, Maudlow-Toston, Cave Gulch, Fridley, Moose Creek, and Cow Creek have shown similar patterns. Forested landscapes, that had previously well planned and implemented management practices that resulted in mosaic-patches of different forest age classes and tree species had a lower probability of carrying a landscape encompassing active crown fire, even under severe fire conditions. Wildfires that developed into active crown fires appeared to gain momentum in areas that had uniform forest crown canopies and burn into large, contiguous stand replacing fires of the highest severity. These types of wildfires cannot be actively suppressed until the weather significantly changes or landscape level fuel treatments are encountered. Wildfires that developed into active crown fires in forests with diverse tree spacing and patches of tree age classes were more probable to burn in a mosaic of small patches of crown fires and non-lethal surface fires, with significantly less severe residual fire effects. According to fire suppression experts, the later scenario represents a higher successful suppression scenario, which is the goal of using management to reduce wildfire hazards.